

BEYOND 'THE HUNTING AND GATHERING MODE OF SUBSISTENCE': CULTURE-SENSITIVE OBSERVATIONS ON THE NAYAKA AND OTHER MODERN HUNTER-GATHERERS

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This article argues that the current debate concerning the status of modern hunter-gatherers has so far ignored a critical question, namely, how they carry out their 'other' subsistence activities and combine them with hunting and gathering. It shows how these combinations fall into characteristic patterns common among modern hunter-gatherers and connected with their own particular way of relating to their environment. It then formulates a model of their heterogeneous yet distinctive 'mode of subsistence'. The argument is supported ethnographically by a detailed account, spanning forty years, of the South Indian Nayaka, combined with brief references to many other groups.

In his 1980 Malinowski lecture, Woodburn expressed with exceptional clarity the orthodox view of hunters and gatherers as 'people who obtain their food from wild products by hunting wild animals, by fishing and by gathering wild roots, fruits and the honey of wild bees' (1982: 432). Work carried out over the past twenty-five years, however, shows this view to be inadequate. It is now clear that for centuries, even millennia, so-called hunter-gatherers have pursued a variety of additional subsistence activities, consuming – sometimes even growing – agricultural and pastoral products.

The obvious task is to take a close look at what hunters and gatherers actually do for a living and to reformulate our view in the light of our findings. That this has not yet been done is largely due to the exceptional position of this particular field of ethnographic inquiry. For a start, the term 'hunter-gatherers', located historically at the disciplinary crossroads of social anthropology, evolutionary theory, ecology and prehistory, focuses concern on the range of means of procuring wild resources (hunting and gathering), and so deflects attention from additional activities (cast as 'other'). To offset this problem, at least in part, I refer to the people here as 'modern' hunter-gatherers. Moreover, theoretical models have tended to take precedence over ethnographic observations in this field, because studies of the contemporaneous peoples concerned have been thought to provide material of potentially capital significance for a number of grand theories spanning across disciplines (such as cultural ecology and evolutionary ecology). As a result, many studies have been carried out in order to advance extraneous theories, rather than for the benefit of ethnography *per se*.

This is not the first time that models have lagged behind observations in modern hunter-gatherer studies. Up to the 1960s, the model propagated by Steward (1936) and Service (1962) held that hunter-gatherers were organized in exogamous, territorial and patrilineal (or patrilocal) bands, while most ethnographers reported, instead, a general flexibility in social arrangements.¹ It was a long time before students admitted that they had not, each independently, found an interesting deviation from the model, but rather that the model itself was inadequate; whereupon they reformulated it, asserting that flexibility characterized the social arrangements of most modern hunter-gatherers (Lee & DeVore 1968:7-8).

There is clearly now a similar need to reformulate the model of their subsistence arrangements. It is expedient, moreover, because the lacuna between theory and observation, together with other contributory factors (e.g. the conjunction of evolutionary and ethnographic perspectives), has given rise to an extraordinary debate concerning the nature and status of modern hunter-gatherer studies themselves.

The debate

Before the 1980s it was generally accepted that modern hunter-gatherers provided a potent insight into the course of human evolution; their way of life, moreover, could be effectively studied by concentrating on their involvement in hunting and gathering. This position was most famously articulated by Richard Lee, who conducted fieldwork among the Dobe !Kung of the Kalahari (originally as a means for an evolutionary inquiry, later converted, however, into conventional ethnographic work), and subsequently headed a multidisciplinary project involving more than a dozen researchers into manifold aspects of Dobe !Kung life. The numerous publications which resulted (including Lee 1979; Lee & DeVore 1968; 1976), have shaped modern hunter-gatherer studies internationally. During the 1980s this position came under increasing attack, mainly led by Schrire and Wilmsen (e.g. Schrire 1980, 1984; Wilmsen 1989), who were originally concerned with archaeological remains in the Kalahari and later mainly with literary accounts. The critique has been based on evidence suggesting that for centuries, so-called hunter-gatherers (Dobe !Kung included) were neither isolated from neighbouring populations, nor involved solely in hunting and gathering, and that, moreover, they played an active part in regional, and even world, socio-economic systems.

In its milder form (e.g. Schrire 1980), the critique dismissed previous research oriented to treating modern hunter-gatherers as a window on human evolution, and suggested that evolutionary questions be left to prehistorians and palaeoanthropologists. In its extreme form (e.g. Wilmsen 1989), however, it argued that the devotion of ethnographic attention to hunting and gathering is in itself spurious; the people should instead be studied in relation to the forces of capitalism and colonialism. Drawing on Wallerstein's (1974; 1979) 'world-system' theory, it went on to re-examine Bushmen (with recurring references to the Dobe !Kung) and to refute most previous ethnographic work. It challenged previous work as regards not only its purported evolutionary implications, but also its claims concerning culture and society (for example, the claim that Dobe

!Kung are egalitarian), whilst at the same time casting doubt on the professional competence of previous ethnographers and on the authenticity of the people's designation as !Kung. It argued that the people studied were nothing but dispossessed victims of colonial oppression, indistinguishable from other poor people in the Kalahari. To put it briefly, the milder critique excluded ethnographers from an intriguing and lucrative field of research – the inquiry into human origins. The more extreme critique challenged both the work of ethnographers in its entirety and the existence of a distinct referent, namely that category of peoples traditionally known as hunters and gatherers, whilst nevertheless appropriating for itself the field of research constituted by their study.²

Coming from an archaeologist, drawing on an impressive but eclectic range of data on the entire Kalahari region, in an argument heavily laden with post-modernist jargon and direct personal innuendo, this extreme version of the critique is overblown. Unfortunately, it has nevertheless become the focus of an acrimonious debate in the form of recent articles by Solway & Lee (1990) and Wilmsen & Denbow (1990), both accompanied by comments from many other students of hunting and gathering, and referring to Bushmen in general, Dobe !Kung in particular, and, by implication, to all modern hunter-gatherers. The debate is unclear because it consists of arguments mounted on disparate epistemological grounds, drawing on data-sets of entirely different natures. Lee's work (in common with the work of his collaborators) draws primarily on data collected over a long period of time through participant observation in relation to one particular group (the !Kung) in one particular locality (Dobe). Concerned with their way of life, it is attentive, as ethnographic work often is, to manifold aspects of everyday life, to detail and context (ideological, social and political). Wilmsen's work, on the other hand, draws on data concerning diverse locations and populations throughout the vast area of the Kalahari, over hundreds and even thousands of years. Concerned with the intrusion and the influence of colonial and capitalist forces at the regional level, it is inattentive in its approach to the dynamics of day-to-day local life, and to the local sociocultural context.

If anything is to be learnt from this debate, it is that ethnographic inquiry should concern itself with the dynamics of contact between modern hunter-gatherers and colonial and capitalist forces, as Wilmsen rightly points out – yet it should do so, as Lee rightly counter-argues, at the local level.³ At this level, the agents of even the most powerful 'world systems' are but flesh-and-blood actors whose influence is constrained by local circumstances. And the articulation of local and world socio-economic systems is *two-sided*.

Even had this point been acknowledged, the crux of the debate would still have eluded its participants. Both sides take the category 'hunter-gatherers' as given and, in relation to the chronicle of their 'other' activities, argue over whether the ethnographically documented peoples are spurious or genuine exemplars of the category. This category, however, is our own, culture-specific construct. In the debate itself (not to mention the area of study as a whole) it is variably harnessed to diverse theoretical perspectives. For example, it may be read as a mode of subsistence that carried human society until agriculture took over; as a way of life representative of, or directly related to, the way of life

of palaeolithic populations; as a mode of adaptation to the natural environment involving adjustment rather than modification; as a 'mode of production'; and as an approach to life – i.e. an ethos, involving distinct values like sharing and egalitarianism. Furthermore, of course, it is not only by virtue of an exclusive emphasis on the activities of hunting and gathering that modern hunter-gatherers have been considered as a class and studied comparatively. Nor is such an exclusive emphasis a necessary condition for hunter-gatherer studies to be accorded evolutionary relevance. Insight into origins may be gained from the perspective of a variety of end-points (Gellner 1988).

Therefore, the cardinal questions for us are whether the 'other' subsistence strategies of hunter-gatherers are carried out in a distinct, characteristic way, and whether they are combined in a distinctive way with hunting and gathering so as together to constitute, despite their variations, a recognizably specific mode of subsistence. Neither side in the debate has yet pursued these questions. Neither has examined, for example, such elementary points as how 'other' activities are articulated with hunting and gathering in terms of stochastic and idiosyncratic patterns. In Lee's work the 'other' subsistence activities (precluded by theory) are merely mentioned – faithfully, but separately, as recent changes, or activities of negligible significance for the traditional way of life. In Wilmsen's work, they occupy a central position, and though Wilmsen describes them with scholarly precision, he only provides a chronicle of occurrences, as befits his approach. Clearly, it is important to consider the 'other' subsistence activities with the same care for detail, and with the same attention to emic perspective and context, that is traditionally given to hunting and gathering and, moreover, to deal with both in an integrative way.

What do modern hunter-gatherers actually do for a living?

Although the accepted formulation describes them as peoples engaged in hunting and gathering, most (if not all) modern hunter-gatherers in fact combine, and flexibly shift between, hunting and gathering and various other strategies, including engaging in waged work, trade, occasional cultivation and stock-keeping, and even (in Australia and North America) government and office work, as well as drawing welfare benefits. The general picture is apparent from the following excerpts from published sources on a variety of modern hunter-gatherer groups.

On Batek of Malaysia:

It is clear that there is a frequent switching from one activity and resource to another and that, the switching is sudden and irregular, not following a fixed annual pattern (Endicott 1984: 130).

They had small-scale farming off and on for many years (1984: 13).

Like most other Malaysian Negrito [they] gained some income and food by working for outsiders (1984: 15).

On Agta of the Philippines:

Fluidity [is] inherent in Agta economic behaviours (Griffin 1984: 115).

They engaged in trade of forest products (1984: 96).

All are aware of plant cultivation and claim to have prepared swiddens in the past, even if they are not actively doing so when queried (1984: 114).

On Mbuti of Zaire:

[Mbuti economic engagement with their neighbours] is a confused state of flux:... they clearly alternate trade with begging; gifts with thievery; wage labour with demands made on religious grounds... preserv[ing] their independence...Mbuti... bring various forest produce to [their neighbours]...and in addition occasionally do day labour or tend the gardens...Trade is irregular, even when frequent (Hart 1978: 331).

On James Bay Cree of Northern Canada:

Wage employment and transfer payments have become sources of significant incomes, and they provide opportunities for some adult males to work on a permanent or on an intermittent basis. Virtually all able-bodied men still participate in some hunting activities, but the degree varies from individual to individual, and from time to time. Intensive hunters often work during the summer period, when hunting is least productive, and when employment is often available in the 'bush' where their hunting activities can be conducted daily around flexible working schedules...On the other hand, those who work often have wives and children who fish or snare small game, while workers themselves often hunt on weekends and take holidays to coincide with a particular productive hunting season; and, since wage employment for many is often temporary, many men hunt between periods of work (Feit 1982: 382).

On Yupik Eskimo:

...these communities do not display isolated households pursuing different objectives, or differentiated sectors based on class or stratification. Virtually all households in the two communities participated in a wide range of subsistence activities...participation in wage employment did not appear to alter subsistence participation and success. One of the factors that made this possible was the redefinition of wage labour to meet local standards and objectives... even the more permanent jobs in the community have been re-defined. Back-ups are designated for positions and other family members often assume duties which allow the nominal permanent employee the free time to participate in subsistence (Langdon 1991: 282-3).

On Bushmen of Southern Africa:

Individuals and even whole families have shifted between strategies. These shifts occurred in both directions... The present generations... heavily involved in pastoral and agricultural economies may be the parents of the next generations of gatherer-hunters (Vierich 1982: 219-20).

A group which today is settled on a borehole, drinking milk and eating maize meal, may tomorrow be back in the bush hunting and gathering... [they] should be seen as opportunists taking advantages of new resources when and if they decided it would be worthwhile (Hitchcock 1982: 235-6).

The areas labelled /Xai/xai, !Kangwa, and North contain groups of !Kung representing the whole spectrum ...from near complete dependence on foraging to complete dependence on employment by Bantu-speakers supplemented with a few goats and small gardens...The degree of dependence on cattle and on agriculture has been observed to vary from year to year... (Harpending 1976: 155).

Ironically, information provided in the works of both sides in the debate reviewed above – so-called traditionalists and revisionists – converges on, and conforms with, this picture of diversity and flexibility in subsistence arrangements. Lee's pioneering input-output study of Dobe !Kung subsistence activities (1969), intended as a study of 'near-pure hunter-gatherers', showed that about one fifth of the local group worked for the Bantu, an additional one fifth moved in and out of the area, possibly pursuing variable engagements outside, and only about three fifths engaged in hunting and gathering (1969: 52-4). Moreover, of the latter, Lee subsequently reported that

most of the men had had experience of herding cattle at some point of their lives...many men had owned cattle and goats in the past...the !Kung were not strangers to agriculture.

Many had learned the techniques by assisting black neighbours and in years of good rainfall had planted crops themselves (Lee 1979: 409).

Schrire's review of literary and historical sources, intended to undermine Lee's portrayal, concluded to similar effect (although approaching it from the opposite direction) that

the literature abounds with the apparent paradox of hunters who guard herds, of landless bandits who corral flocks, of free-ranging thieves with well-stocked homes, and wild hunters bound to formal and restrained links of clientship to herders... modern San periodically engaged in farming again and again over the past few centuries, if not the past few millennia (1980: 27).

The Nayaka case-study: introductory notes

These excerpts from a wide range of contemporaneous tribal groups indicate that they have 'something' in common (little explored so far because the debate has revolved around the exclusiveness of hunting and gathering). To formulate this 'something', we need first to examine a particular case in detail and over time. For this purpose I shall move now to the Nayaka, whom my own research concerns. They live in the Nilgiri-Wynaad of South India, in the border area between Tamil Nadu, Kerala and Karnataka. Official estimates (to be treated with caution) put their total number in the region of 1000. They are widely spread in small local groups, which maintain little, if any, contact with each other. My fieldwork was carried out among a local group – which I call the Gir valley group – comprising 69 people in 1979 and 66 in 1989 (background information is provided in earlier publications, especially Bird 1983*a, b*; Bird-David 1987; 1988; 1990; and forthcoming). They maintained contact with several dozens of Nayaka in other localities. The ethnographic material on which this analysis draws is from fieldwork conducted during 1978-9 and a revisit in 1989, combined with a 40-year data-base on Nayaka wage work (see details below). An analysis of the 1978-9 material appeared in 1983 (Bird 1983*b*). Data obtained subsequently confirmed the validity of the approach taken there, and the present analysis expands from it and concerns the entire period from 1949 to 1989.

The relevance of the Nayaka material to hunter-gatherer studies – its 'representativeness' – obviously depends on how the category 'hunter-gatherer' is constructed. And this appears now to be undergoing reformulation. With regard, however, to our present concerns, the Nayaka conform in broad outline to the picture of modern hunter-gatherers conveyed by the examples cited in the previous section. In terms of Woodburn's distinction between immediate-return and delayed-return systems (Woodburn 1980; 1982; 1988), the Nayaka have a system of the former type and therefore resemble other groups with immediate-return systems such as !Kung, Hadza and Mbuti, whilst contrasting with groups such as Inuit and the Indians of subarctic North America, whose systems are of the delayed-return type (see Woodburn 1980 for further examples of each type). I would add, however, an important qualification.

Woodburn's classification, commendable for its ethnographic orientation, rests essentially on one simple dichotomy: between hunter-gatherers who do not invest, and hunter-gatherers who do. It is anchored to the technicalities of hunting and gathering as subsistence activities (contrasting, for example, improvised tool-use with setting up traps; and immediate consumption with storage for

delayed consumption). But in addition, these differences are projected onto the social and even the ideological spheres: thus, lack of 'storage' in social relations is contrasted with investment therein, lack of concern about past and future is contrasted with temporal concern. Interestingly, the classification does not go beyond hunting and gathering, but nevertheless it opens the latter construct up by bringing in social and ideological concomitants, reinforcing it, furthermore, by drawing on hunting and gathering as a metaphorical source for describing these concomitants. Woodburn argues that all groups belong to either one or the other of these two types, viewed as polar opposites, although in a footnote (1982: 449) he adds that the division is simplified and will have to be developed (see Ingold 1983). Recent work indeed suggests that not only the Australian groups (whom Woodburn notes), but also other groups (e.g. Niupiaq, Bodenhorn 1989, Batua Pygmy, Shultz 1991) exhibit immediate-return features in some respects and delayed-return features in others. It seems likely that the division is contingent on the matter at hand. Moreover, a reformulation is imminent – in my view, a shift away from polar types to the establishment of a prototype immediate-return system and diverse (economic, social, ideological) elaborations on it, especially on the theme of investment. If that is the case, the Nayaka would exemplify the prototype immediate-return system, having possible relevance (in varied degrees) to the whole range of modern hunter-gatherers (see also Bird-David 1990).

By chance, the Gir Valley Nayaka were studied in a way which has yielded material ideally suited to the purposes of this article. They live on the slopes of a steep valley, its base joining the Malabar of Kerala and its head lying on the Nilgiri-Wynaad plateau of Tamil Nadu. At the turn of the century, a footpath route connected the valley with the Malabar. Later on, however, due to boundary changes which placed the valley in Tamil Nadu (instead of Kerala) and a new tarmac road cross-cutting the Nilgiri-Wynaad, this route fell into disuse and was replaced by one going down from the Nilgiri-Wynaad.

Walking down the replacement route in 1978 – a steep, twisted jungle track which seemed to go deeper and deeper into thick jungle – it did not even occur to me that there could be anything but deeper jungle further down. The Nayaka I met there – after a two-months' search for 'near-pure' hunter-gatherers – seemed ideal for my research. They had distinctive Negrito-Australoid features. Metal digging sticks, as well as bamboo carrier-baskets and containers (some filled with honey combs), were scattered around their grass-and-bamboo huts; the people talked enthusiastically about their gathering and hunting in the forest; and my local guide, local authorities and neighbours in the area, all confirmed my first impressions. It was two days after I moved in with them (after a further month of preparations), that I walked further down the path, only to discover, barely three kilometres away, a small rubber and coffee plantation. It had been established as early as the turn of the century by a Scottish planter,⁴ who climbed up from the Malabar as high as was feasible for the growing of rubber. The plantation had later turned into a small, isolated and marginal estate, connected to the outside by a rough road, just useable only during the dry season. Nevertheless, it turned out that my 'near-pure hunter-gatherers' had been working there, on and off, since

the late forties. In 1978, two-thirds of the local employable Nayaka worked there.

My subsequent study included orthodox research into hunting and gathering *and* a detailed study of 'other' Nayaka subsistence activities – especially their involvement with wage work which was by far the most prominent 'other' activity during the time of my fieldwork. (They also engaged, however, in trade in minor forest produce and in the occasional cultivation of fruits and coffee, both obtained from neighbours.) The study of their wage work benefited from a unique source of data: records of each worker which detailed daily attendance, designated task for each day, wages (in kind and later in money) and additional yearly benefits. These records were kept in a small shed by the plantation officers. Dating from 1948, they provided altogether over 11,796 days of observations. The records for 1954–1959 were destroyed by rodents, but all the rest remained in perfect condition. In 1987, the data were entered on computer and analyzed. In 1989, I returned to the Gir valley, to check, among other things, whether the Nayaka had increased their engagement in wage work at the expense of their hunting and gathering. To retain the 'test' format of the two-stage study, the two periods (up to and including the 1978–1979 fieldwork, and since then up to and including the 1989 revisit) will be discussed separately. In my discussion, and bearing in mind the lessons of the recent debate, attention will be paid to the two-sided articulation of local and world systems.

The World and the world of the Gir Valley (I): 1900–1979

Dense with evergreens and some bamboo forest, the Gir valley around the turn of the century belonged to the Raja of Nelliyalam. He leased out about 500 acres at the bottom end of the valley to a Scottish company which cultivated rubber. The plantation was abandoned during the first world war for a number of reasons, including world transport problems, the low international price for rubber and the spread of local rubber disease. Within a few years, however, it was re-leased by an Indian planter from Kerala. An Indian merchant from Madras subsequently bought the entire forest estate from the Raja. The 1948 Act (Madras estate, Abolition and Conversion into Ryotwari) and its extension in 1969 to the Nilgiri-Wynaad – an agrarian reform concerning (mostly forest) estates of princely absentee landlords – gave rise to a complex legal argument concerning rights of lease and ownership. While the issue was being slowly dealt with in the court system (it remained unresolved in 1989), major changes were prohibited. The plantation could not expand, and apart from the occasional felling of old and selected trees in overgrown areas, subject to official permission, trees in the forest could not be cut down.

During the first half of the century, the Nayaka did not work much in the plantation. Labourers were brought from the planter's region in Kerala to work on seasonal contracts, leaving their families behind. They had little if any contact with local Nayaka, living in temporary accommodation in a central location. They tapped and smoked the latex and, at the end of the season, walked with the latex to the nearest road and left the valley.

The situation changed with the Plantation Labour Act of 1951. It abolished contract work, forcing planters to offer not only permanent employment and

proper accommodation to immigrant workers, but also work opportunities to their families. About two dozen workers and their families settled in the valley. Brick buildings were constructed for the workers, and the production of coffee was introduced to create work for their non-skilled families. Thus, the employment of immigrant workers became costly and Nayaka labour came into demand.

In 1964 a new employment structure was introduced. It was enforced by legislation intended to protect workers (not covered by the 1951 Labour Act) who worked less than fifteen consecutive days each month – and who were therefore not entitled to a permanent position – but who nevertheless worked, on and off, for the same employer. These workers were given the status of casual employees. This was an improvement on their previous status as temporary employees since it bestowed some, though not all, of the benefits granted to permanent workers. Many Nayaka took to casual labour, which did not call for daily attendance at work.

The plantation officers depended on Nayaka labour more than the Nayaka – who could turn to the forest – depended on them, not only because immigrant labour was costly, but also because the Nayaka were highly adept at required tasks, such as weeding, clearing jungle paths, regulating the foliage over coffee plants, and so on. These tasks constituted about two-thirds of the work performed in 1978–9.

The plantation officers, furthermore, depended on Nayaka for their communication with the outside world. A Nayaka was employed daily to walk up the steep path to the nearest village to collect mail from the post office. The mail included the planter's instructions to his field-officers and their reports back to him, wages for all the employees (including the field-manager himself) and personal letters. The Nayaka also brought basic food items for the plantation officers.

The plantation was by far the largest local employer of the Nayaka. However, the superintendent competed for their labour with a trader commissioned to buy minor forest produce, especially soapnuts (much in demand by the detergent industry), honey and spices for the forest estate. In addition, small traders from nearby villages occasionally arrived in search of minor forest produce. All of these competed with the dozen or so immigrant workers who also needed Nayaka labour to help cultivate their small plots of land. Timber workers arrived every five years or so to fell selected trees in the forest, also competing for Nayaka labour, needing them for guidance, work with elephants and various other day-jobs, such as preparing ropes from tree bark. It was not uncommon to see the plantation superintendent, the trader and neighbours in Nayaka hamlets, soliciting the Nayaka to work for them.

Day-wages were high in comparison with wages paid to rural workers because the plantation was subject to the wage regulation of the industrial sector (it originally produced only rubber, adding coffee later). During 1978–9, for example, workers earned 8 Rp. a day compared with the 3 Rp. commonly paid to agricultural labourers. Traders and neighbours had to pay Nayaka highly as well, in order to procure their labour. Nayaka free income was exceptionally high, since they could continue to use freely available forest resources (vegetable food, meat, fish, firewood, building material).

Three tea-shops were opened in the Gir valley (one was closed down in 1979) by entrepreneurial immigrant workers. They were placed in huts constructed from forest material by the Nayaka, who were paid for the job. The shop-keepers competed for Nayaka custom, and extended credit facilities to them, for which they compensated by inaccurate accounting. The Nayaka frequently failed to pay back their debts. The shop-keepers would nag and threaten and eventually withdraw credit, only to extend it again since the Nayaka remained their main customers. The shop-keepers took to waiting for Nayaka near the plantation office on the weekly pay-day, trying there and then to extract repayment.

It is not clear whether the shop-keepers' practice led directly to the informal arrangement now to be described. In any event, it worked in 1979 both to their own advantage and to the advantage of the Nayaka and the plantation. Although not followed always, nor by everyone, this informal arrangement was sufficiently in evidence to warrant comment. On many occasions, the plantation officer deducted payment for Nayaka debts and transferred it directly to the shop-keepers, monitoring the shop-keepers' accounts at the same time, and paying the Nayaka the balance – if any – on pay-day. From their own perspective, the Nayaka were working in the plantation in order to collect food and other commodities from the shops. The plantation also benefited from this arrangement because it boosted Nayaka attendance at work.

Whilst they worked for wages in the plantation, and also for traders and neighbours, the Nayaka continued to hunt and gather in a regular manner. In fact, in neither time nor space was there any clear demarcation between hunting and gathering and the 'other' pursuits. On their way to work in the plantation – and sometimes even in the course of their work – they occasionally collected forest produce for their own use or for subsequent trade. Sometimes, the plantation superintendent even sent them during their working day – which ran from 8 a.m. to 4 p.m. – to collect honey for the office. On their way to the registration point to report for work, Nayaka would sometimes encounter a trader, a neighbour or a timber worker, and spend the day working for him. When they went hunting and gathering, on the other hand, their trails took them in and out of rubber-forested areas, coffee plantations and jungle. They fished in streams that ran within the territorial boundaries of the plantation as well as in the forest.

Nayaka wage-work (I.1): 1978-9. Fieldwork observations clearly suggested that in spite of appearances, wage work was for Nayaka just another means of gaining food (and other material requirements), combined as the opportunities arose, and in no fixed way, with hunting and gathering. As will be seen, they engaged with plantation work in a way substantially different from that of other workers.

During 1978-9 about two-thirds of adult employable Nayaka were registered by the plantation, the majority (72 per cent.) as casual workers, and the minority (28 per cent.) as permanent workers. (Only 53 per cent. of the employable females worked, compared with 75 per cent. of men; but more women were permanent whereas 92 per cent. of men worked on a casual basis.⁵) Those employed casually worked, or were expected to work, regularly but not continually, whereas the permanent workers were supposed to work regularly and daily. In most cases, the former had been employed initially as permanent workers. Then,

against pressure to continue as such, and in marked contrast with other workers who desired and often secured permanent positions, they resigned in favour of casual employment. On average, they held their permanent positions for five years, but the mean was one year. Upon resigning, they received provident and gratuity payments – ranging between the equivalent of 85 and 160 day-wages. All of them, including the old, used the money up before they took up casual labour in the plantation, or other work additional to hunting and gathering.

The casual workers worked on average less than four days a week. They worked least during February and March, when ample forest produce was available, and most during the rainy season. They often absented themselves from work in the early days of the week, after they had received the previous week's wage on the Saturday, and during September, after they had received the annual bonus at the end of August (paid to casual workers, as to permanent, in proportion to their total work-days). The Nayaka permanent workers often drifted into this temporal pattern of work. They would then be called to order by the plantation superintendent, work more regularly for a while, would relax again ... until finally they would resign.

Casual workers exploited their status -- permanent workers emulating them as much as they could – in order to control not only the amount of work time, but also the kind of work they did. When called to perform tasks related to forest work (such as clearing forest paths, weeding), pursued without tight supervision, they reported for work in large numbers. When sought for other tasks (such as construction and portage), they avoided work, disappearing into the forest if the superintendent specially came to their hamlets to persuade them to come for work. Highest attendance was registered in the case of a task called 'shade lopping', which involved cutting to size the jungle trees that regulated shade over young coffee plants. The Nayaka organized themselves into teams consisting of husband and wife, as is common on forays. Each team worked on its own, the husband climbing up to cut excessive foliage, the wife clearing the debris away.

Neither permanent nor casual workers saved the money they earned, or tried to upgrade or accumulate material possessions. By and large, they used the money to obtain basic edible food (such as tea, rice and pastries) from the local tea-shops. Of the non-Nayaka workers, the men alone came for a drink and a chat in the early evening, before walking home to a dinner cooked by their wives. By contrast, the whole Nayaka family would come to the tea-shop, daily, and often twice or even thrice, to eat and drink. Moreover, in the mornings, they often sent their children to fetch pastries and ready-made tea in glass bottles from the tea-shops. The Nayakas' daily expenditure in the tea-shops was much higher than that of other plantation workers – in some cases three or four times more.

Unaccustomed to saving and storing, the Nayaka did not buy the ingredients for making tea and pastries from the tea-shops. Occasionally, they bought a one or two days' supply of rice grains, yet cooked it as they would the wild yams gathered from the forest. On occasions, they even took a small quantity of rice grains on expeditions and cooked it in the forest instead of wild roots. They boiled the rice in an unspecific amount of water, as if it was tubers, producing porridge (*ganji*) of a kind which other workers regarded with derision.

Thus, the particular way in which they integrated themselves into the *World* of plantation, money, commodities and shops, in their *own local world* of interdependent plantation owner, traders, shop-keepers and themselves, suggested that although they had been working in the plantation for over thirty years, they did not settle for good into a new mode of subsistence, but instead incorporated wage work into their own. If that was indeed the case, we would expect there to have been constant moves into and out of wage work. This prediction was borne out by the analysis of the 1949-1979 data, and by my subsequent 1989 visit.

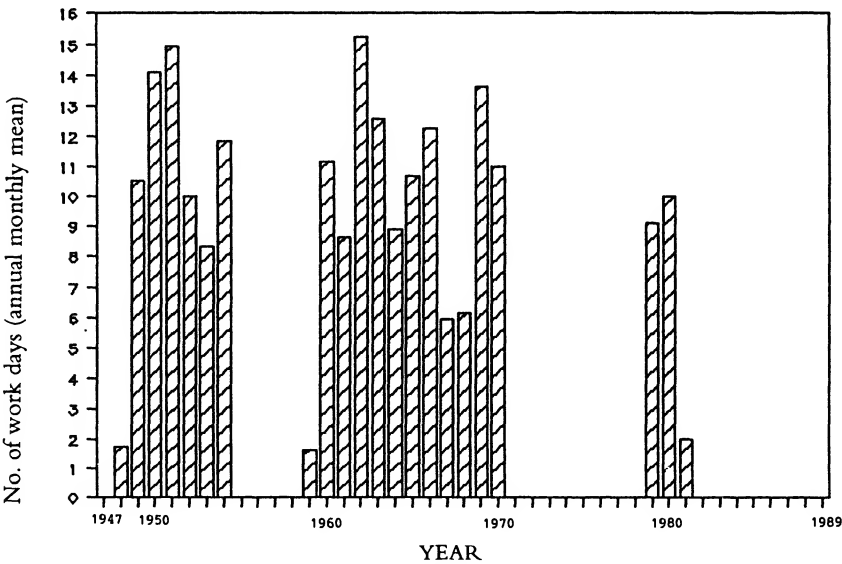


FIGURE 1. No. of work days (annual monthly mean), Kungan.

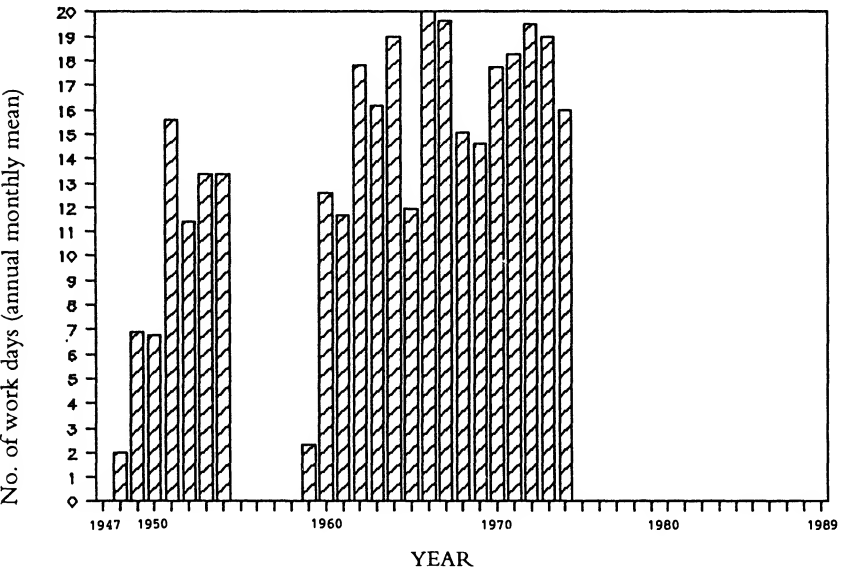


FIGURE 2. No. of work days (annual monthly mean), Bommi.

Nayaka wage work (I.2): 1949-1979. The bulk of day-to-day data on the engagement in plantation work of named individual Nayaka from 1948 to 1979, computerized in 1987, was reduced to monthly measures, creating two separate data sets. The first data-set provides monthly measures of the aggregate numbers of workers and of the numbers of person work-days (separated by gender). The second provides separate work-profiles of seven individuals, selected for a combination of reasons (e.g. continuity of names in the records,⁶ generational representation and kinship interrelations).

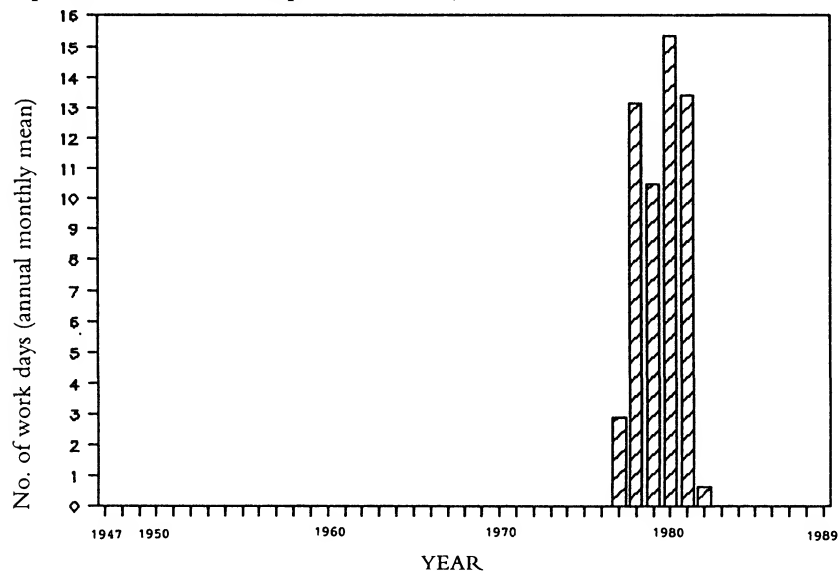


FIGURE 3. No. of work days (annual monthly mean), V. Mathi.

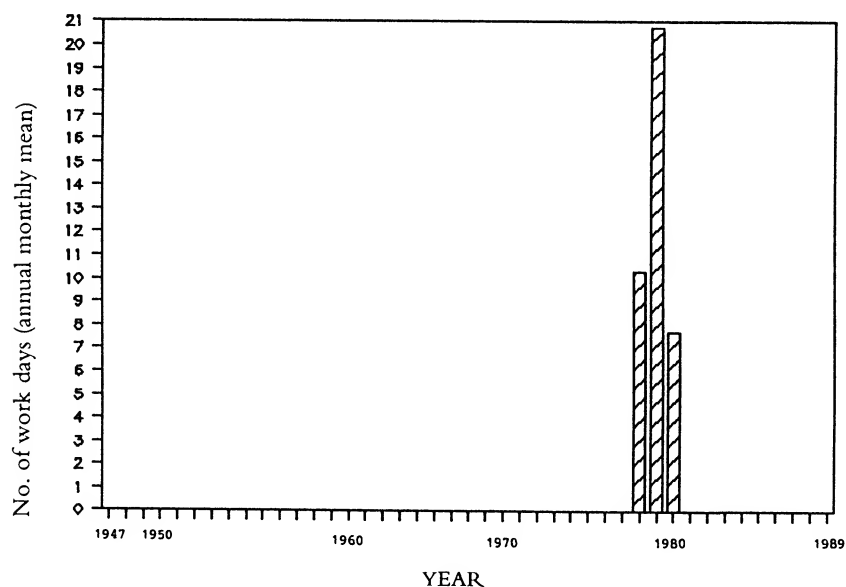


FIGURE 4. No. of work days (annual monthly mean), C. Kunkan.

Figures 1-4, generated from the second data set, show the number of work-days per average month, each year, for four individuals: Kungan, Bommi, V. Mathi and C. Kunkan. Kungan was born in the early 1920s and died in 1985. Bommi was his wife, a few years younger, and the mother of their four children. V. Mathi is the eldest of the four, born in the late 1950s, and mother of four young children. C. Kunkan is her husband, about her age, who settled in the Gir valley after his marriage. During most of 1978-9, all four lived in the same hamlet. Figure 5 provides a day-by-day perspective on Kungan's work during 1970. Figures 6-9, generated from the first data set, show the total numbers of Nayaka workers, and the sum of their work-days, on an average month each year (figs. 6 and 7) and – to control for seasonal changes – during the three-month dry season each year (figs. 8 and 9). During the period in question, the change in the number of potential Nayaka workers was negligible.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
Jan.		+	+	S	+	+	+	+	+	+	S				+	+	+	+	S	+	+	+	+	+	+	S						18
Feb.	S																															0
Mar.	S							S	+	+	+	+	+	+	S		+	+	+			S		+	+	+		S	+	+		14
Apr.	+	+	+	+	S		+	+	+	+		S						+	+	+	S				S			+	+	+		11
May	+		S		+	+	+	+	S		+	+	+	+	+		S	+	+	+	+	+		S								14
June					S	+	+	+	+	+	+	S	+	+	+	+	+	+	+	+	S	+	+	+	+	+	+	+	+	+		17
July		+	+	+	S		+	+	+	+	+	S					+	+	+	S	+	+	+	+	+	+	S	+	+	+	+	22
Aug.	+	S		+	+	+	+	+	S	+	+	+	+	+		S	+	+	+	+	+	+	S			+	+	+	+	S		21
Sept.	+	+	+		S					+	+	S					+	+	+	S		+	+	+	+	+	S					13
Oct.			S				+	+	S																							2
Nov.																																0
Dec.																																0

FIGURE 5. Kungan's work-days during 1970. S, Sundays; +, attendance at work.

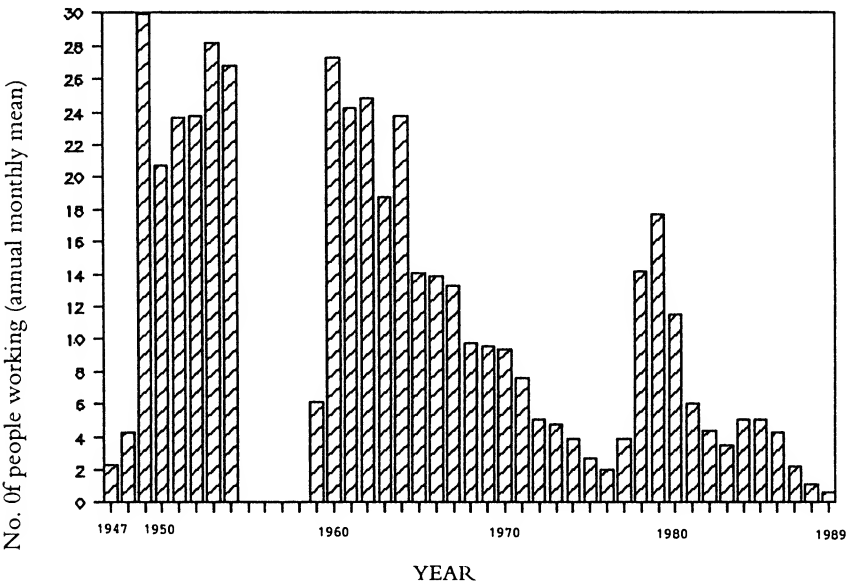


FIGURE 6. No. of people working (annual monthly mean), 1947-89.

The figures clearly show significant fluctuations in Nayaka attendance at work from year to year, in the numbers of workers and person-days, both for individuals and for aggregates. The data thus clearly reflect variation between individuals and over time, at least from day to day, season to season and year to year. The longer-term pattern up to 1979 cannot, however, be determined unequivocally from the figures. They show a peak in work attendance during the initial years; a rapid decrease from the late 1960s to the early 1970s (the 1954-

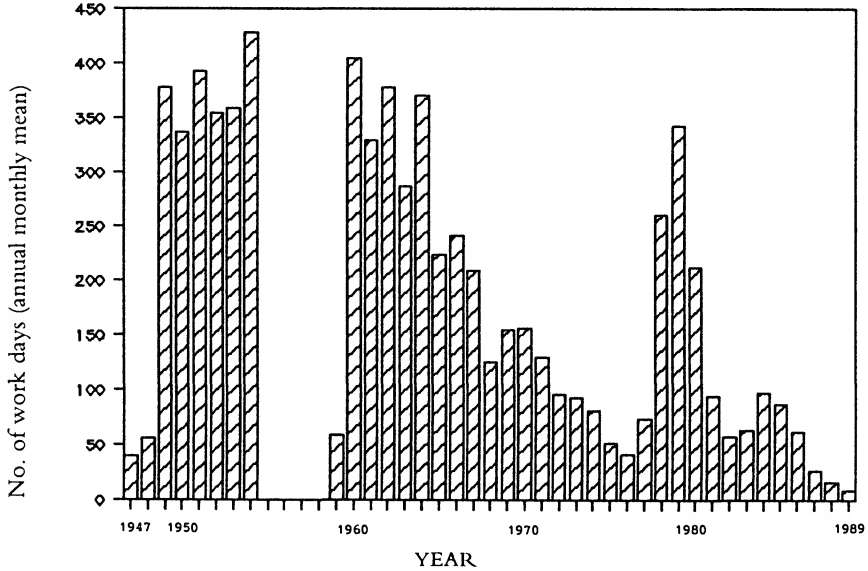


FIGURE 7. No. of work days (annual monthly mean), 1947-89.

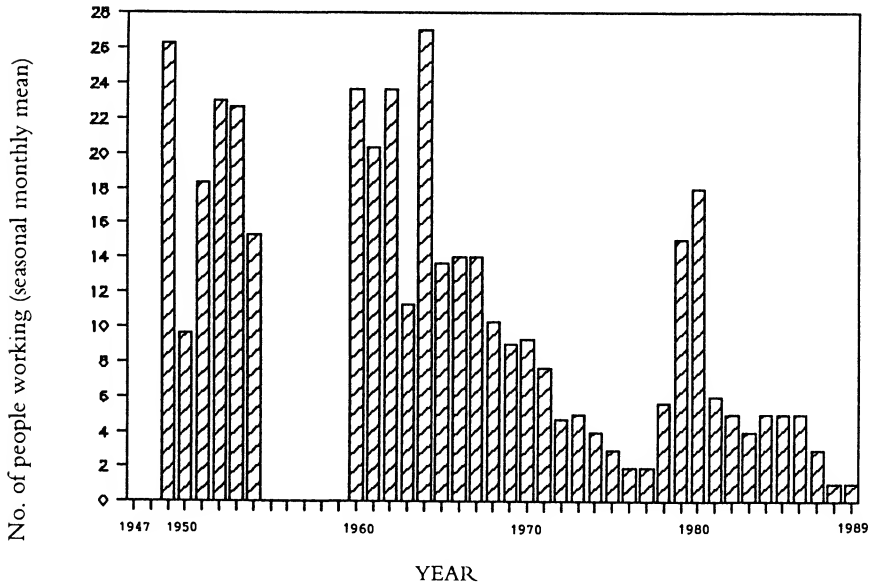


FIGURE 8. No. of people working (seasonal monthly mean), February-March-April, 1947-89.

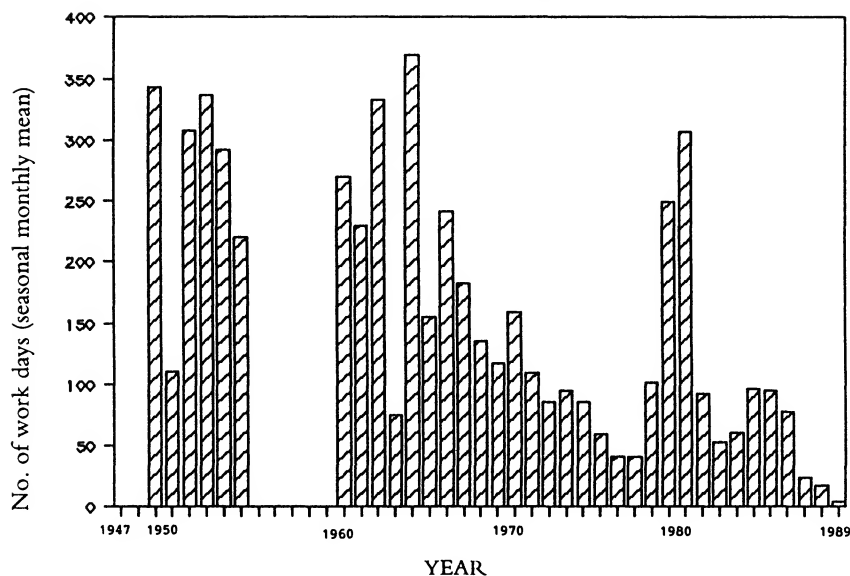


FIGURE 9. No. of work days (seasonal monthly mean), February-March-April, 1947-89.

1959 gap is created by a lack of data, the rest may be exaggerated by the new employment structure and registering method dating from 1964); and a peak again during 1978-9. It is not clear, however, whether the figures show that despite the decline in work attendance during the intermediate years, Nayaka were increasingly becoming a part of the labour proletariat in the Nilgiri – Wynaad – one of many other ethnic groups of labourers; or whether they show that there were fluctuations in Nayaka work not only from day to day and from year to year, but also from decade to decade, and more generally that, with the exception of hunting and gathering, change was the constant in their mode of subsistence. The 1989 re-visit was intended, among other issues, to resolve this issue.

The World and the world of the Gir Valley (II): 1979-1989

During 1979-1989, the Nilgiri-Wynaad population grew substantially, following a massive influx of Tamil-speaking refugees from Sri-Lanka, and of land-hungry immigrants from neighbouring Kerala. Villages grew, as did the pressure on land. Tribal peoples in the region (Mullu Kurumba, Betta Kurumba, Paniya and Nayaka) were losing land to the newcomers at an alarming rate. The major impact on the Gir valley was, initially, that permission was granted to fell not only old trees but also up to four trees per acre, provided that branches were cut off the timber and sold locally as firewood. Land-use in the valley was still restricted to the original forest and the plantation, because the legal problem was not yet resolved.

The Nayaka could continue, therefore, to hunt and gather in the forest and work in the plantation. However, the increased timber exploitation also created a new work-opportunity. Nayaka were employed to prepare the firewood, and

were paid Rp. 40 for a standard pile called *atti* (about 6 feet long and 3 feet high, the width dependent on the length of the branches). This work could be pursued with more autonomy and flexibility than work in the plantation, fitting in better with hunting and gathering. Moreover, two workers could comfortably prepare an *atti* in a single day, thus each earning in one day the wage then paid in the plantation for two working days.

Gradually, all the Nayaka shifted from plantation work to the new work, as shown in the declining numbers of plantation workers from 1979 onwards in figures 6–9. (The last Nayaka rendered her formal resignation on the day I arrived in the valley for the re-visit.) As the timber company mainly operated during the dry season, and as a number of Nayaka halved their work time as their daily income doubled, the Nayaka went more frequently on forays in the forest than in previous years. They continued to gather honey, wild yams, fruit and berries, and to fish and (infrequently) hunt to varying degrees. They also continued to sell minor forest produce to traders – for considerably higher prices because competition had increased. For example, on a good day in season, they could earn as much as Rp. 50 per person per day by collecting and selling honey.

While the Gir valley Nayaka were experiencing growing prosperity – all the more remarkable by comparison to tribal welfare in the Nilgiri-Wynaad as a whole – the century-old Gir plantation was subjected to considerable financial pressure, not least because it lost Nayaka labour to the timber company. It reduced its activities, laying off a third of the skilled immigrant labour force, many of whom were planning to leave the valley and return to their home-places because they had to vacate the accommodation provided by the plantation. The plantation owner himself came for a visit – a feat rarely attempted by the urban owners of the Gir valley – to see what else could be done. As I was leaving the Gir valley, the plantation was on the brink of closure.

Nayaka wage work (II.1): 1979-1989. From 1979 until they finally ceased to work in the plantation, Nayaka attendance at work was much as it was previously. No Nayaka worked for more than an average of four days a week. The younger generation who started to work in the plantation during the late 1970s as permanent workers – two men and five women – held that status for an average period of 5.5 years. The slight increase in the length of permanent service relative to the older generation (an increase of half a year) was related at least in part to the increased tolerance, born of need, of the plantation officer. After warning Nayaka workers, he waited six rather than the mandatory one month before sacking them.

Working for the timber company, Nayaka were able to organize their work, more than they could in the plantation, along the same lines as in hunting and gathering. Teams of husband and wife and, in some cases, of four young men, worked in their own time; the contractor collected the wood in the forest; and payment was made in the company office in the nearest village. The Nayaka went up to the village, collected their money, bought provisions in the village shops and returned to their huts.

Despite their financial prosperity, there was no obvious change in their attitude to money and possessions. They still occupied the same sites as they did in

1979, living partly in the old huts, partly in new ones constructed in the old style on three of the 1978-9 sites. The one conspicuous change was that black-and-white newspaper cuttings of Indian film stars hung on the bamboo walls of most huts, suggesting the increasing influence of the outside world, in the light of which the absence of other changes was even more remarkable.

There was a flourishing local lore on how the last few Nayaka to resign from the plantation spent their benefits. The favoured story concerned one Nayaka man, about forty years old, highly able and therefore kept on in a permanent position for over ten years in spite of frequent absences. When he was finally made to resign, he was entitled to benefits in excess of Rp. 4000 (approximately £130) – half to be collected from the local post office and half directly from the plantation. He paid no attention to repeated summonses from the post office and finally a messenger had to be sent with the money to his jungle hut. (By the time I left the valley, he had not yet claimed his benefits from the plantation, concerned that they would seize the opportunity and urge him to come for work.) For months he did not work. He spent the money on a few items of cheap clothing, a new metal knife and a torch, and the rest in the local tea-shops. On one occasion, constantly talked about, he hired a private taxi to take him from the road above the valley to the regional centre at Gudalur and immediately back.

The last decade, however, has also sadly seen a high mortality rate among Nayaka adolescents and a general deterioration in Nayaka health (the demographic figures are too small to speak for themselves). At least in part, this was related to their economic success. Nayaka became a hunter-gatherer version of Midas of the Greek legend – successful money earners, who suffered consequently from a diet in which the proportion of polished rice grew at the expense of nutritious forest roots, fruits, nuts and meat.

Clearly there were fluctuations in Nayaka wage-work not only from day to day and year to year, but also from decade to decade. They were committed to hunting and gathering which, as shown elsewhere (Bird-David 1992), is central to the way in which they relate to their world. At the same time, they were lax about regularity and exclusiveness of practice. They were flexibly open to other opportunities that presented themselves – so long as these did not preclude the pursuit of hunting and gathering.

Trade, cultivation, stock-keeping and office work

A number of modern hunter-gatherers have combined hunting and gathering with the trade and sale of wild products, rather than with wage labour, as Nayaka have done, but the principle of combination is apparently similar. Hart (1978), for example, describes how hunting for the Mbuti in Zaire is increasingly geared to the commercial market. Their hunting is intensive and frequent; they respond to market demand; and traders visit even the deep-forest sites. Yet the trade is irregular, if frequent. Despite traders' efforts to the contrary, it is the Mbuti who decide whether the nets will go out on any particular day, and they 'show themselves free to pursue alternative activities such as honey gathering or fruit collecting, though these have no commercial value' (1978: 345). Hart describes this as showing a 'cavalier attitude towards the market system' (p. 348) but

the phrase, evocative though it is, misconstrues their behaviour, as do the similar phrases 'opportunistic foraging' and 'foraging mentality', which will be discussed later.

Many modern hunter-gatherers even combine occasional cultivation and stock-keeping with hunting and gathering, but re-organize the former activities to resemble the latter as much as possible. Moreover, the principle of combination is similar to that described above – the activities are combined as opportunities allow, so as to permit continued, if intermittent, hunting and gathering. The Nayaka show how cultivation is reorganized, while other cases – I shall draw on a recent work by Sugawara (1991) on the San – show this for stock-keeping. The Nayaka themselves do not keep stock.

Nayaka in the Gir valley cultivated rice on rare occasions, years apart, when they received seedlings from their neighbours. Those who did (some did not at all) invested considerable time and effort in preparing the paddies, sometimes working continuously for days. But this investment was seen as a means by which to procure food on a one-off basis, and not as the start of a cyclical process of investment for consumption and re-investment.

The following case illustrates the pattern. It concerns Kungan, whose work history was analyzed above (figure 5). During a period of thirty years, from the late 1950s to the late 1980s, he cultivated rice three times. In 1964 he prepared his first paddy, and later exchanged the field for goods with a non-Nayaka neighbour. In 1971 and 1979, he prepared two additional paddies, but after he had harvested the crops he abandoned the fields to the forest. Neither he nor his wife weeded the fields or warded off predators – tasks which they carried out a few times during that period, in return for payment, in the paddies of their neighbours.

In addition to rice – and, instructively, in contrast with it – the Nayaka also planted coffee. This began in the mid-1970s, when one person received coffee cuttings from the plantation. In spite of subsequent neglect, the sturdy coffee plants took root and produced beans, and these were sold for cash which was immediately spent on rice. It was easy to obtain coffee cuttings, and many other Nayaka followed the precedent, leaving the plants untended to grow, and collecting the beans in season. The coffee was planted around the hamlets wherever there was space. Individuals owned the coffee bushes they themselves planted, which were scattered amidst those of others, the spatial pattern reflecting the off-and-on, idiosyncratic sequence of planting. The planted area gradually grew; then by the mid 1980s the immediate area around the hamlets was exhausted and very few plants were added thereafter. Instead, parents started to transfer rights over certain plants to their children as they got married (people also occasionally transferred rights to newcomer relatives). When the latter sold the coffee, they gave part of the purchased rice to the donors. The donors – several individuals in many cases (e.g. the two sets of parents) – may have already moved to live in other hamlets. Thus, coffee-related links cut across the entire local community. (It remains to be seen what will happen when the coffee plants reach the end of their productive life-span.)

Goat-keeping arrangements in a San community, settled in twenty sedentary camps near the !Koi!Koi borehole in the Central Kalahari Game Reserve, under

the Remote Area Development Programme, show a similar way of dealing with what could easily become (and for the neighbours of the San, already are) means of production. In a recent paper, Sugawara (1991) describes how all goat-keepers in the community (both those with large herds and those with only a few goats) frequently entrust some, or all, of their goats to the care of close kin in other camps. The caretaker in this arrangement appropriates the milk, if any, and the offspring belong to the owner. Significantly – and this shows again that accretion of stock is not their main concern – owners are often unable subsequently to recognize their own individual goats. Neither the caretaker nor the owner, in any case, engages intensively in herding. Every morning, a few residents, sometimes only children, simply drive the herd away from camp and do not follow. Sugawara reports that a complex network of keeping and entrusting goats spreads throughout the camps.

Modern hunter-gatherers, especially in North America, frequently combine hunting and gathering with government and other office work. Even these activities can be, and often are, reorganized. We have already seen, from the examples cited earlier in this article, how regular workers keep a 'back-up' – a relative to step in and do the job while one goes hunting (Langdon 1991), or how they go hunting on weekends and take holidays to coincide with particularly productive hunting seasons, or engage in temporary work (Feit 1982). In both Australia and North America, hunting and gathering are often combined with drawing welfare benefits.

Thus, there seem to be real differences between many if not all modern hunter-gatherers and their neighbours in the ways in which they carry out 'other' subsistence activities – wage work, trade, even cultivation and stock-keeping – and in the ways they combine them with hunting and gathering. The problem remains of how to conceptualize these differences.⁷

The cultural dimension

In their attempts to characterize the common essence of these varied subsistence arrangements, ethnographers have often used terms and phrases such as 'opportunism', 'the foraging mentality', 'opportunistic foraging' and 'a cavalier attitude'. These notions have negative connotations. 'Foraging' implies mindless rummaging about for food, likening the actors to non-human animals. 'Opportunism' denies them principles, belief and purpose – it supposes that they take advantage of all opportunities, and are committed to nothing but gain. These notions derive from the Western culture-specific perspective, and it is from within this perspective that the modern hunter-gatherer kind of behaviour tends to be associated with lack of knowledge and volition, of principles and care, and of effort and planning. A hunter-gatherer culture-specific perspective puts the matter in a different light.

As Gellner has recently put it, human cognitive sensitivity to the outside world (barring the unique exception found within modern Western society) is strongly mediated by shared socio-cultural concepts. These are held in common by members of what Gellner (1988) calls the 'conceptual community'. I have argued in two recent papers (Bird-David 1990; 1992) that in the case of modern hunter-gatherers primary concepts are drawn on the metaphor of close kinship. Details

are provided in these papers, and similar conclusions can be drawn from other works (e.g. Bodenhorn 1989; Endicott 1979; Feit 1991; Fienup-Riordan 1983; Ingold 1987; Tanner 1979; Turnbull 1965). Briefly, for hunter-gatherers the natural environment is seen to be peopled by human-like relatives who share food with its human inhabitants. It is a giving environment which provides for their needs. They conceive themselves to be part of a cosmic system of sharing. They relate in this way to the natural environment as and because they hunt and gather within it, and vice versa. This particular way of relating to the environment implies three constitutive elements of modern hunter-gatherer subsistence arrangements, which can only be sketched here: knowledge, flexibility and resource-bias.

First, knowledge is deeply integrated with subsistence activities. People are constantly tuned to day-to-day changes in their environment, and know it intimately, in the way one 'knows' close relatives with whom one shares intimate day-to-day life. Their knowledge is expressed in a multi-stranded idiom – practical, ecological, symbolic and social. But all in all this knowledge contains that which Westerners, who take the stance of observers, place in a separate logical space and classify as ecological knowledge (see Gellner 1988; Ingold forthcoming). Hunter-gatherers are especially attentive to local and temporal nuances. They have – in Gellner's terms – cognitive sensitivities to what we will call opportunities.

Secondly, they are constantly ready and eager to engage with the environment, as it changes, through transactions of give and take (especially take), in the same way that one deals with relatives with whom one has, and wants to maintain, an intimate relationship. This means, in our terms, that they are flexible and take up the opportunities they observe. Furthermore, they trust that in the nature of things their needs will be provided for (though of course, they expect recurring ups and downs in the provision, and in some situations have to invest care, respect and ritual attention to keep the relationship close and binding). Therefore, they feel free to use whatever resources are afforded by the natural environment *and* by other agents – the way one does when it is known that there is a secure basis to fall back on.

Thirdly, they possess a resource-bias. This element is best explained in terms of a (highly) simplified opposition to the activity-bias of a world revolving around production.⁸ In the latter, society is (cognitively) sensitive to production activities: they come first in a simple sense – products exist *by definition* only after they have been produced. Furthermore, the classification of activities, perceived as distinct, influences the way in which the resources themselves are grouped. For example, agriculture and stock-keeping are construed as different activities – hence agricultural and pastoral produce are distinguished. In contrast, hunter-gatherer society is (cognitively) sensitive to resources: by definition they exist *a priori*, and activities follow to suit. Furthermore, the means of getting resources do not establish the nature of those resources. For example, Nayaka do not distinguish between jackfruit they grow and jackfruit they collect in the wild, as we would do on the grounds of an initial distinction between gathering and agriculture. Similarly, they hunt *and* gather animals according to the circumstances. Thus, while to us it seems that they shift between subsistence activities,

from their perspective they simply obtain the resources afforded by their environment through whatever means happen to be suitable.

It follows, firstly, that modern hunter-gatherers are neither in the business of foraging (as above) nor in the business of producing. Ingold (1987), who asserts that they 'appropriate' resources, is concerned restrictively with hunting and gathering, viewed narrowly in relation to social relationships. For a wider use, it seems simplest to say that they *procure resources*, or engage in *procurement* of resources.⁹ Distinguished from 'to produce' and 'production', as also from 'to forage' and 'foraging', 'to procure' (according to the Shorter Oxford Dictionary) is 'to bring about, to obtain by care or effort, to prevail upon, to induce, to persuade a person to do something'. 'Procurement' is management, contrivance, acquisition, getting, gaining. Both terms are accurate enough for describing modern hunter-gatherers who apply care, sophistication and knowledge to their resource-getting activities; whose activities range from collecting what the environment gives to prevailing upon it, persuading it and managing it in order to get resources (e.g. Williams & Hunn 1982). Having established the terms, the important point is that in *most if not all* aspects of what they do for a living, modern hunter-gatherers *procure* resources. They do so even when they engage in activities which are the prototypical production activities for other peoples – namely, cultivation and stock-keeping. Hunter-gatherers do not even then engage in production – in the full sense of the word, neither as understood by Marx as a cyclical process, where production and consumption are dialectically related, nor in the neo-classical sense, where production is all about accretion of resources, inextricably connected with re-investment. They cultivate and keep stock primarily as means of getting resources – to procure food – not for what Marx called productive-consumption, nor for part re-investment. The extension of sharing practices to these activities, in the various ways it is done, fully or partially, directly or indirectly, in respect to fields and stocks, or yield and milk, reinforces the logic of procurement against the logic of production.

It follows, secondly, that modern hunter-gatherers are not opportunists. They are committed to the logic of procurement – especially to the activities of hunting and gathering which are the prototypical examples of procurement and are implicated in some of their primary cultural concepts. This commitment is so deeply integrated into their experience of the world, and of themselves, that it is not dependent on the exclusive, nor even on the continuous, pursuit of hunting and gathering. They procure natural products as well as a variety of additional resources – *as opportunities arise*. This is totally different from being opportunistic.

The modern hunter-gatherer mode of subsistence: a prototypical model

While the culturalist discussion presented above provides an integrative outline of what it is that modern hunter-gatherers do – and think – for a living, it is important to highlight the economic aspect (granting, without emphasising, the cultural dimension),¹⁰ if only in view of the current debate and in order to conclude with a like-for-like replacement for the inadequate formulation cited at the beginning of this article. My proposition is that the mode of subsistence of modern hunter-gatherers is characterized by four interrelated features which constitute a prototype, rather than a definitional model.

(a) *Autonomous pursuit of resource-getting activities.* Individuals and families shift autonomously between means of procuring resources in response to their circumstances and opportunities.

(b) *Diachronic variation.* The shifts do not follow any regular temporal pattern. They occur, variably, from day to day, month to month, year to year, decade to decade, even generation to generation. Variety and flexibility, in other words, are conspicuous in any diachronic perspective.

(c) *Synchronic diversity.* On frequent occasions, diverse means are pursued simultaneously within the social group, at its various levels – within the local group, within the group of kin, within the residential group, and even within the household itself. Variety and flexibility, in other words, is likely to appear in any synchronic perspective.

(d) *Continuous presence of hunting and gathering.* Although individuals shift frequently between means of procuring resources, hunting and gathering are visibly maintained in a two-fold fashion. First, most if not all adults hunt and gather at least every now and then (this relates to feature (b) above). Secondly, when they themselves do not hunt and gather, some of their relatives and friends do (this relates to feature (c) above). In other words, synchronic diversity and diachronic variation in combination maintain a continuous presence of hunting and gathering.

This model suggests, then, that peoples we call modern hunter-gatherers appear to have a distinct, if heterogeneous, mode of subsistence. This mode of subsistence has, however, to be viewed in a cultural context if we are to appreciate its coherence and perpetuation, for the occurrence of contact and the presence of 'other' subsistence activities tell us little in themselves. The model can be elaborated as follows. Normally some members of the group pursue hunting and gathering. Their associates do not, but they keep in close contact with the former. The experiences of the former reinforce the common trust in the viability of hunting and gathering for everybody in the group. While not currently involved in hunting and gathering, the latter therefore do not fully commit themselves to their respective diverse activities. They shift between them on the basis of opportunities, and eventually take up hunting and gathering. Meanwhile, those who initially pursued hunting and gathering possibly shift now to other activities. Through their own direct experiences, they keep up the knowledge and skills which are prerequisite for a subsistence based on forest resources, while at the same time it is now their experiences which reinforce the common trust in the viability of hunting and gathering. What we have here, then, is a group of people who share the knowledge and skills of hunting and gathering, as well as a trust in its viability. They reproduce these among themselves. However, although they hunt and gather regularly (in the sense of *d* above), at any time only a core of people – whose composition constantly changes – actually engages in these activities.

NOTES

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¹ The term fluidity, which was originally used (e.g. Lee & DeVore 1968: 6-7), carries the negative connotation of an absence of all form, while the term flexibility, which I adopt in preference, simply emphasises the lack of rigid form.

² The intermediate position appearing in Schrire (1984) can be seen as an attempt to appropriate the forum of *International Conferences on Hunting and Gathering Societies* – the legacy of the interdisciplinary *Man the Hunter* conference – away from the ethnographers who had come to dominate it.

³ Of course, this has already been done extensively in reference to modern hunter-gatherers in Australia and in North America.

⁴ An earlier intrusion of Europeans into the valley took place at least two decades earlier. S. Jennings, Secretary to the South India Gold Mining Company, describes (1881: 44) an encounter with Nayaka of the Gir Valley.

⁵ Tables and additional figures can be found in Bird (1983a).

⁶ Nayaka use few personal names, and several individuals may share the same name (see Bird-David 1983a). The identity of workers in some cases is not clear from the records, and these names have been avoided.

⁷ I do not imply in any way that radical changes do not occur. Occasionally they do; individuals, and in some cases, whole communities adopt their neighbours' ways. But such cases would need to be the subject of a separate discussion. Whether they should be regarded as acculturated modern hunter-gatherers, ex-hunter-gatherers, or as exceptions to the rule, is a matter for careful consideration, which requires, of course, dealing with the issue of what we mean by modern hunter-gatherers.

⁸ This is a tentative formulation which needs to be developed more carefully.

⁹ I thank Caroline Humphrey and Barbara Bodenhorn for helpful conversations we had on this issue.

¹⁰ See Bird-David (1990) for a related reformulation of modern hunter-gatherer property and exchange arrangements (ethnographically explored in reference to comparisons between Nayaka and neighbouring shifting cultivators, called Betta and Mullu Kurumba); and Bird-David (1992) on work effort and standards of living (ethnographically explored by comparing the Nayaka with the Mbuti and the Batek).

REFERENCES

- Barnard, A. 1983. Contemporary hunter-gatherers: current theoretical issues in ecology and social organization. *Ann. Rev. Anthropol.* 12, 193-214,
 ——— 1987. Hunting and gathering societies: Fourth international conference. *Curr. Anthropol.* 28, 234-6.
 Bird, N. (subsequently Bird-David) 1983a. Conjugal families and single persons: an analysis of the Naiken social system. Thesis, University of Cambridge.
 ——— 1983b. Wage-gathering: socio-economic change and the case of the Naiken of South India. In *Rural South Asia: linkages, change and development* (ed.) P. Robb. London: Curzon Press.
 Bird-David, N. 1987. The Kurumbas of the Nilgiris: an ethnographic myth? *Mod. Asia Stud.* 21, 173-89.
 ——— 1988. Hunter-gatherers and other people: a re-examination. In *Hunters and gatherers, I: History, evolution and social change* (eds) T. Ingold, D. Riches & J. Woodburn. Oxford: Berg.
 ——— 1989 The people and the ethnographic myth: an Introduction to the study of the Nayaka. In *Blue Mountains: the ethnography and biogeography of a South Indian region* (ed.) P. Hockings. New Delhi: Oxford Univ. Press.
 ——— 1990. The giving environment: another perspective on the economic system of gatherer-hunters. *Curr. Anthropol.* 31, 183-96,
 ——— 1992. Beyond 'the original affluent society': a culturalist formulation. *Curr. Anthropol.* (March).
 ——— (forthcoming). The Nayaka. In *Encyclopedia of world cultures*. New Haven, Conn.: Human Relations Area Files.

- Bodenhorn, B. 1989. 'The animals come to me, they know I share': Niupaiq kinship, changing economic relations and enduring world views on Alaskan North Slopes. Thesis University of Cambridge.
- Endicott, K. 1979. *Batek Negrito religion: the world view and rituals of a hunting and gathering people of peninsular Malaysia*. Oxford: Clarendon Press.
- 1984. The economy of the Batek of Malaysia: Annual and historical perspectives. *Res. econ. Anthropol.* 6, 29-52.
- Feit H.A. 1982. The future of hunters within nation-states: anthropology and the James Bay Cree. In *Politics and history in band societies* (eds) E. Leacock & R.B. Lee. Cambridge: Univ. Press.
- 1991. Gifts of the land: hunting territories, guaranteed income and the construction of social relations in James Bay Cree Society. In *Cash, commoditisation and changing foragers* (eds) N. Peterson & T. Matsya. Osaka: National Museum of Ethnology.
- Fienup-Riordan, A. 1983. *The Nelson Islands Eskimos; social structure and ritual distribution*. Anchorage: Alaska Pacific University Press.
- Gellner, E. 1988. *Plough, sword and book: the structure of human history*. London: Collins Harriell.
- Griffin, P.B. 1984. Forager resource and land use in the humid tropics: the Agta of northeastern Luzon, the Philippines. In *Past and present in hunter gatherer studies* (ed.) C. Schrire. London: Academic Press.
- Harpending, H. 1976. Regional variation in !Kung populations. In *Kalahari hunter-gatherers: studies of the !Kung San and their neighbours* (eds) R.B. Lee & I. DeVore. Cambridge, MA: Harvard Univ. Press.
- Hart, J.A. 1978. From subsistence to market: a case study of the Mbuti net hunters. *Hum. Ecol.* 6, 325-53.
- Hitchcock, R.K. 1982. Patterns of sedentism among the Basarwa of Eastern Botswana. In *Politics and history in band societies* (eds) E. Leacock & R.B. Lee. Cambridge: Univ. Press.
- Ingold, T. 1983. The significance of storage in hunting societies. *Man* (N.S.) 18, 553-71.
- 1987. *The appropriation of nature: essays on human ecology and social relations*. Iowa: Univ. of Iowa Press.
- (forthcoming). Culture and the perception of the environment, paper presented to 6th EIDOS workshop on 'Cultural understandings of the environment', S.O.A.S., London, June 1989.
- Jennings, S. 1881. *My visit to the goldfields in the south-east Wynaad*. London: Chapman & Hall.
- Langdon, S.J. 1991. The integration of cash and subsistence in Southwest Alaskan Yupik Eskimo communities. In *Cash, commoditisation and changing foragers* (eds) N. Peterson & T. Matsya. Osaka: National Museum of Ethnology.
- Lee, R.B. 1969. !Kung Bushman subsistence: an input-output analysis. In *Environment and cultural behaviour* (ed.) A.P. Vayda. Garden City, NY: Natural History Press.
- 1979. *The !Kung San: men, women and work in a foraging society*. Cambridge: Univ. Press.
- & I. DeVore (eds) 1968. *Man the hunter*. Chicago: Aldine.
- 1976. *Kalahari hunter-gatherers: studies of the !Kung San and their neighbours*. Cambridge, MA: Harvard Univ. Press.
- Schrire, C. 1980. An enquiry into the evolutionary status and apparent identity of San hunter-gatherers. *Hum. Ecol.* 8, 9-32.
- (ed.) 1984. *Past and present in hunter-gatherer studies*. London: Academic Press.
- Schultz, M. 1991. The Batua and the Baoto of the Central Basin of Zaire: a study of change in subsistence pattern and hunter-gatherer/farmer interaction under the impact of colonialism. Thesis, University of Cambridge.
- Service, E.R. 1962. *Primitive social organization: an evolutionary perspective*. New York: Random House.
- Solway, J. & R.B. Lee 1990. Foragers, genuine or spurious?: situating the Kalahari San in History. *Curr. Anthropol.* 31, 109-46.
- Steward, J.H. 1936. The economic and social basis of primitive bands. In *Essays in anthropology presented to A.L. Kroeber* (ed.) R.H. Lowie. Berkeley: Univ. of California Press.
- Sugawara K. 1991. The economics of social life among the central Kalahari San (G//anakhwe and G//wikhwe) in the sedentary community at !Koi!kom. In *Cash, commoditisation and changing foragers* (eds) N. Peterson & T. Matsya. Osaka: National Museum of Ethnology.
- Tanner, A. 1979. *Bringing home animals: religious ideology and mode of production of the Mistassini Cree hunters*. London: Hurst.

- Turnbull, C. 1965. *Wayward servants: the two worlds of the African Pygmies*. London: Eyre and Spottiswoode.
- Vierich, H.I.D. 1982. Adaptive flexibility in a multi-ethnic setting: the Basarwa of the southern Kalahari. In *Politics and history in band societies* (eds) E. Leacock & R.B. Lee. Cambridge: Univ. Press.
- Wallerstein, I. 1974. *The modern world system*. New York: Academic Press.
- 1979. *The capitalist world system*. Cambridge: Univ. Press.
- Williams, N. & E. Hunn (eds) 1982. *Resource managers: North American and Australian hunter-gatherers*. Boulder, CO: Westview Press.
- Wilmsen, E.N. 1989. *Land filled with flies: a political economy of the Kalahari*. Chicago: Univ. of Chicago Press.
- & Denbow, J.R. 1990. Paradigmatic history of San-speaking peoples and current attempts at revision. *Curr. Anthropol.* 31, 489-524.
- Woodburn, J. 1980. Hunters and gatherers today and reconstruction of the past. In *Soviet and Western anthropology* (ed.) E. Gellner. London: Duckworth.
- 1982. Egalitarian societies. *Man* (N.S.) 17, 431-51.
- 1988. African hunter-gatherer social organization: is it best understood as a product of encapsulation? In *Hunters and gatherers: history, evolution and social change* (eds) T. Ingold, D. Riches & J. Woodburn. Oxford: Berg.

Au-delà du mode de subsistance 'fourrageur' : observations sur les Nayaka et sur d'autres chasseurs-collecteurs modernes

Résumé

Selon l'auteur, les débats actuels sur le statut des chasseurs-collecteurs modernes ignorent une question centrale, celle de leurs 'autres' activités de subsistance, et de la manière dont elles sont associées aux activités de chasse et de collecte. L'article montre que ces agencements forment des modèles reflétant des modes d'adaptation à l'environnement qui sont uniques et qu'on retrouve chez beaucoup de chasseurs-collecteurs modernes. Un modèle rendant compte de ce 'mode de subsistance' hétérogène mais distinctif est ensuite proposé. Ce modèle, basé sur plus de quarante ans de travail avec les Nayaka de l'Inde du Sud, fait également référence à un certain nombre d'autres matériaux ethnographiques.

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